

RACK-3000 CHASSIS USER'S MANUAL

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Chapter 1 Product Information

1.1 General Information

Rack-3000 is a PC/AT compatible computer designed for industrial applications. It is a steel rugged chassis specially designed to work under harsh environment for high reliability application. The Rack-3000 features 14-slots passive backplanes and high reliability AC/DC input power supply (options available are: ACE-920A, ACE-932A, ACE932T, ACE925T, ACE925C, ACE-916V, ACE-935A, ACE-83A and ACE-R30A)...

Rack-3000 will withstand shock, vibration, dust and wide range of temperature in industrial environments. A lockable door protects drives and switches from unauthorized misuse and particle. Two removable cooling-fans installed in the front panel for optimum cooling system.

1.2 Product Specifications

General specification

- Construction : Heavy-duty steel
- Disk Driver : Three 5.25" drive and two 3.5" drive (FDD or HDD) open space one 3.5" internal HDD space
- Cooling Fan : Two ball bearing fans (8cm)
- Indicators : Three LEDs display for power HDD and alarm activities
- Dimension : 19" rackmount, 4U height, 431(W) X 176(H) X 520(D) mm

Passive Backplanes (Optional)

Features 14 slots full-length backplanes with the options: PCI-14S, PCI-14S2, PCI-14S3, BP-14S, PX-14S, PX-14S2, PX-14S3, PX-14S5IP-14S and IP-14S3...

Power Supply

PS/2 size of AT/ATX power supply for Rack-3000 are ACE-920A/ 932T/ 935A/ 925C/ 916V/ 832A. For DC input power supply, you may choose: ACE-932T, ACE-925T, ACE-925C or ACE-916V. ACE-R30A redundant power supply is optional.

Working Environment

- Operating Temperature : 0~50°C environment
- Relative Humidity : 5~95% Relative
- Vibration : 5-17Hz, 0.1" double amplitude displacement
17-640Hz, 1.5G acceleration peak to peak
- Shock : 10G-acceleration peak to peak
- Safety approval : meet CE, FCC

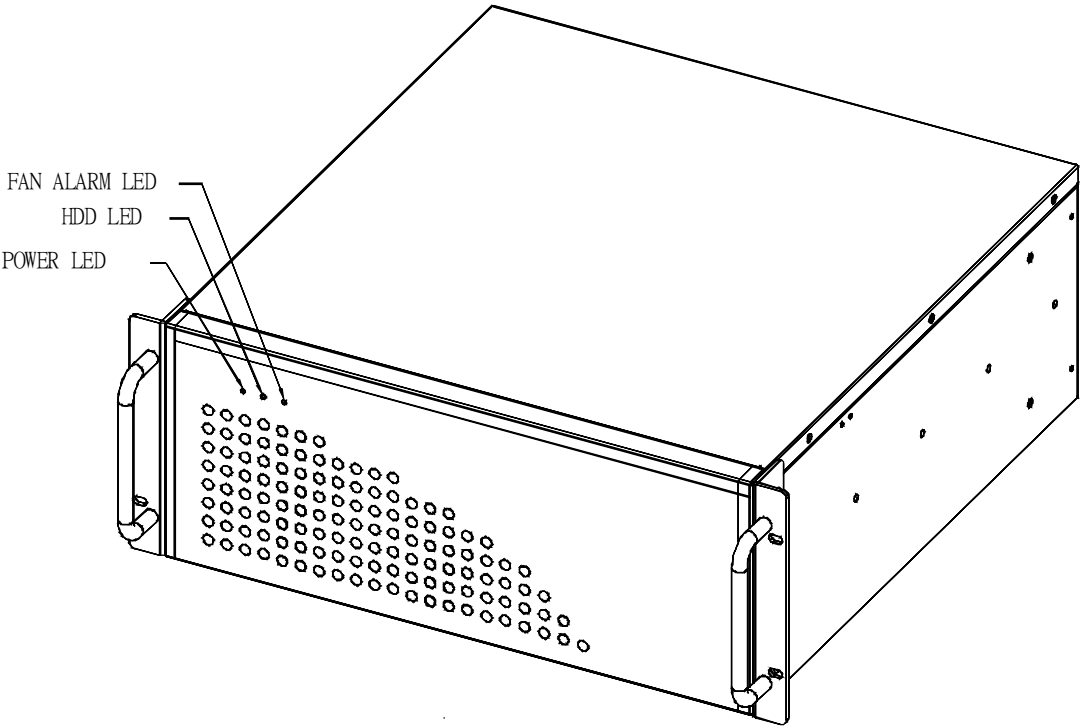
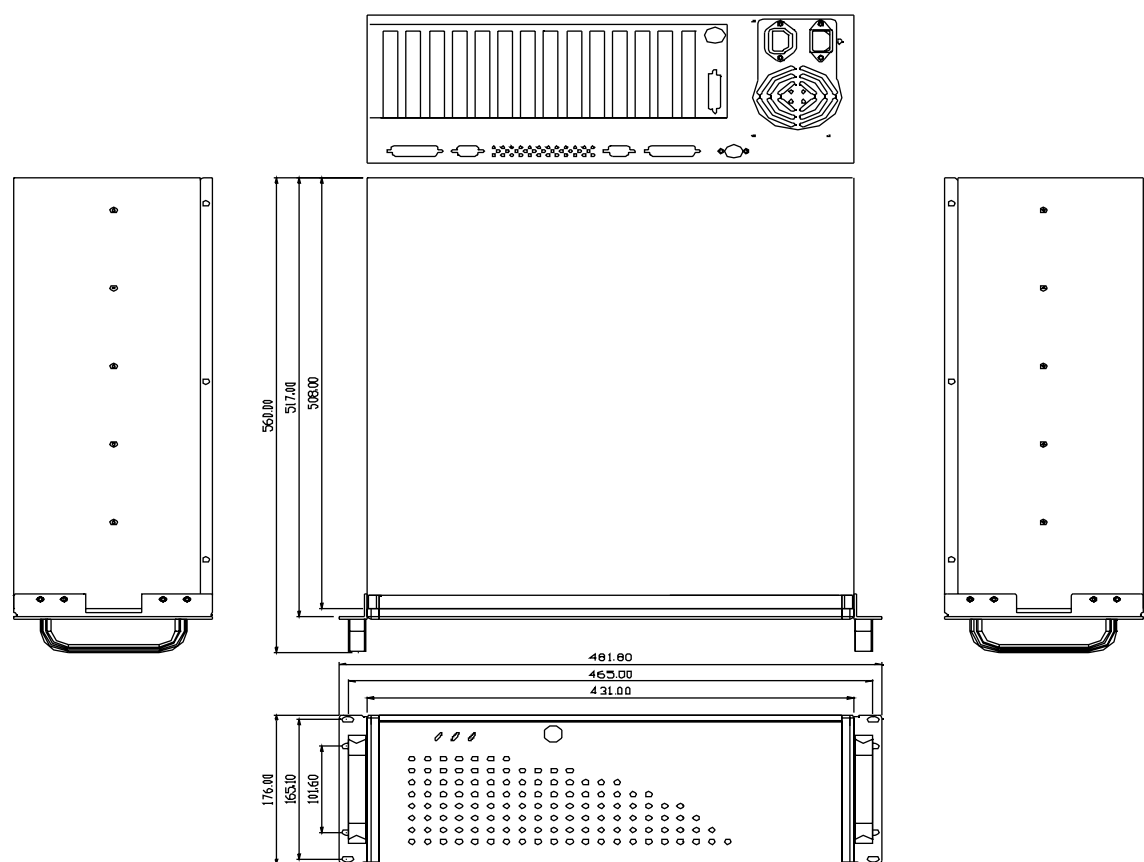
Cooling Fan

Two removable ball bearing cooling fan (8cmX8cm)

Drive Capacity

Three 5.25" drive and two 3.5" open FDD or HDD space and one 3.5" internal HDD drive space

1.3 Dimensions



Chapter 2 Installation Procedure

The following procedures are provided to assist you in installing the Rack-3000, please follow the steps below:

2.1 Filter of the Lockable Door

A lockable door installed in the front panel .The filter is located at the inner of the door. It should be cleaned at least once a month to achieve optimum performance. The filter can be removed simply by slide out the locker. If filter worn out, replace new one, lock the filter locker.



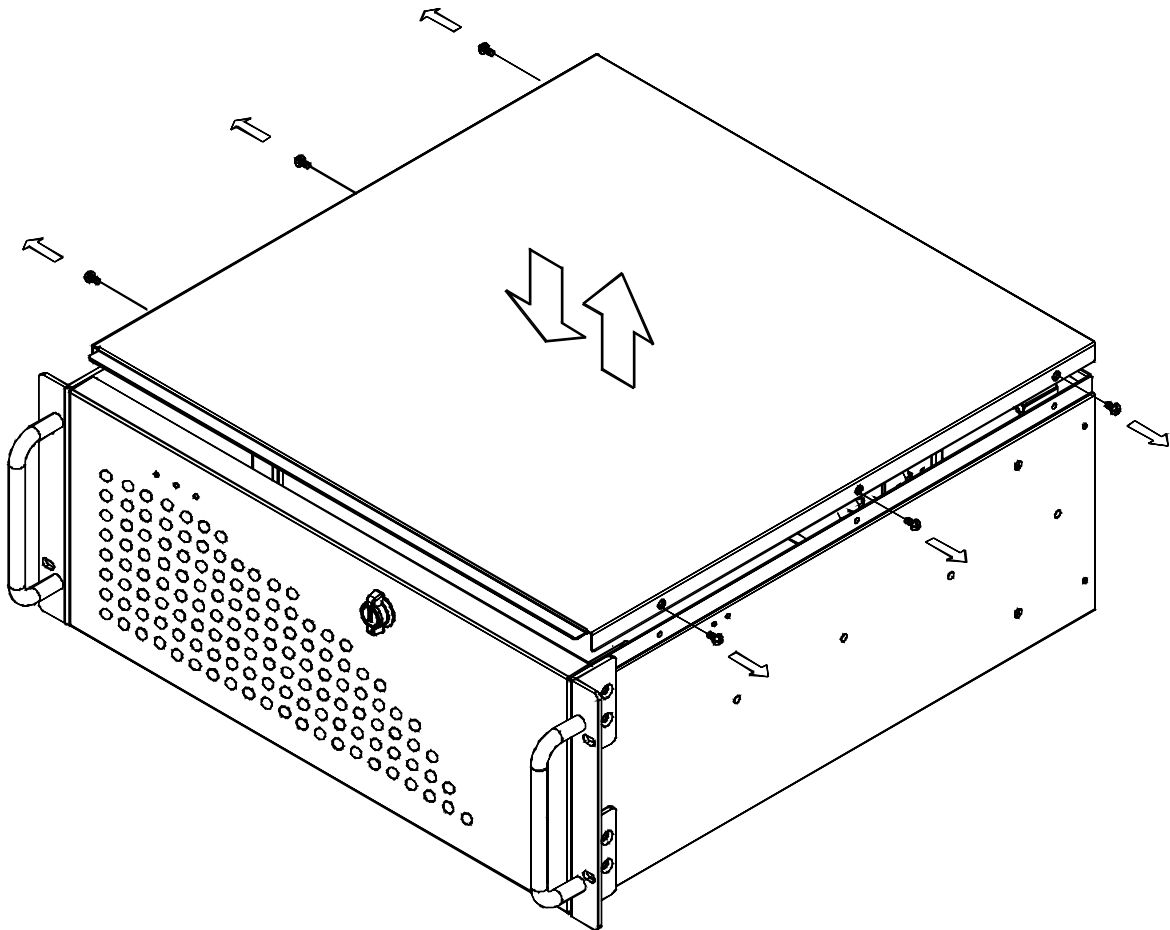
2.2 The Front Panel of Rack-3000

The drives, fans and power switch in the front panel. They protect by lockable door for unauthorized misuse and particle environment.



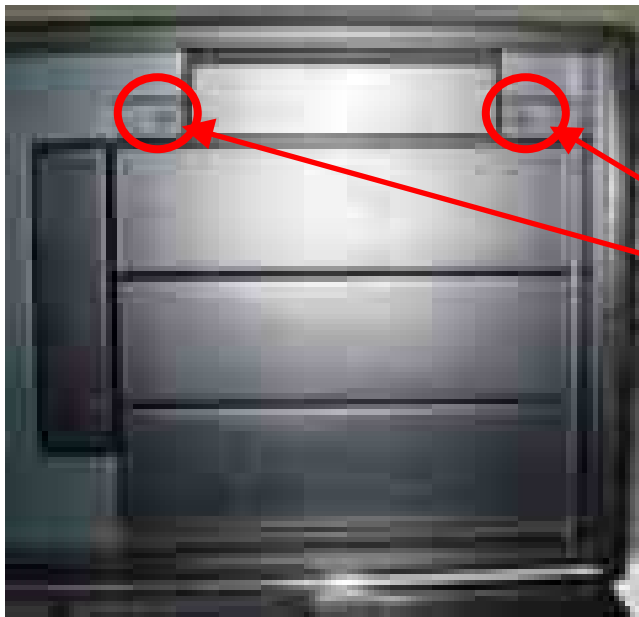
2.3 Removing the chassis cover

The top cover is fixed by 6 screws at each side and the top of the chassis, remove them and slide the cover to the rear of the chassis. Figure below shows how to remove the chassis cover.



2.4 Disk Drives installation

1. Open the lockable door in the front panel
2. Remove 4 screws that lock the disk drive bay
3. Pull out the disk drive bay
4. Attach the drivers to the bracket with screws and connect flat cable & power cable to the driver
5. Plug in the drive bay and lock it by screws.



SCREW X 2

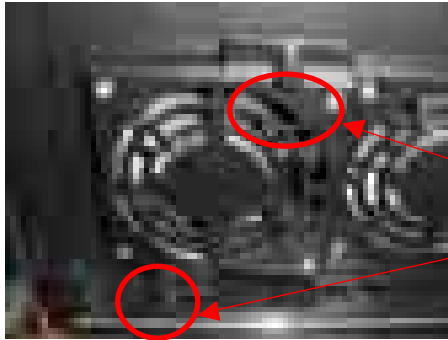
SCREW X 2



2.5 Fan Installation

The Rack-3000 is easy to install the fan module in the chassis. Plug in the plastic locker, connect the fan cable with the A60 controller board.

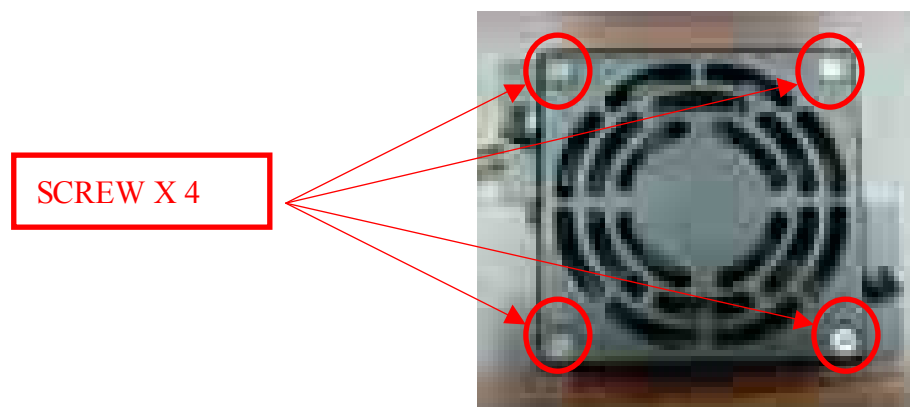
Figure below illustrates how to install the fan module.



Removable cooling-fan:
By two spring screw



YELLOW : Signal Feedback
RED : +12
BLACK : GND

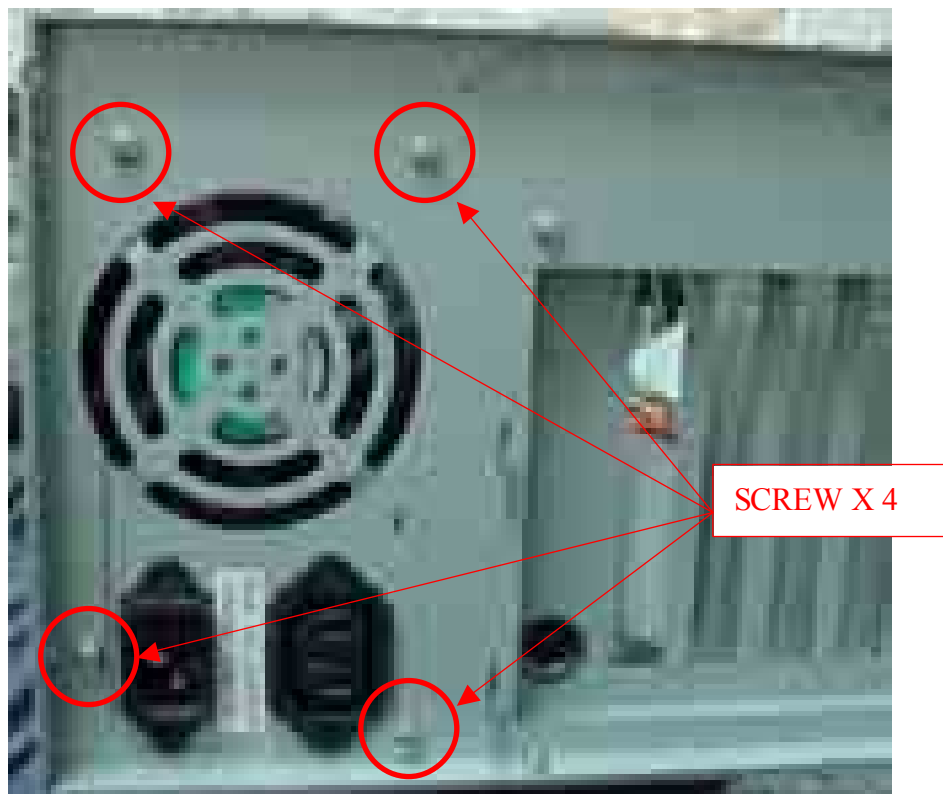


SCREW X 4

2.6 Power Supply Installation

2.6.1 General Power Supply

For the Rack-3000 installation: ACE-920A/ 932A/ 932T/ 935A /925T/ 925C/ 916V/ 832A...



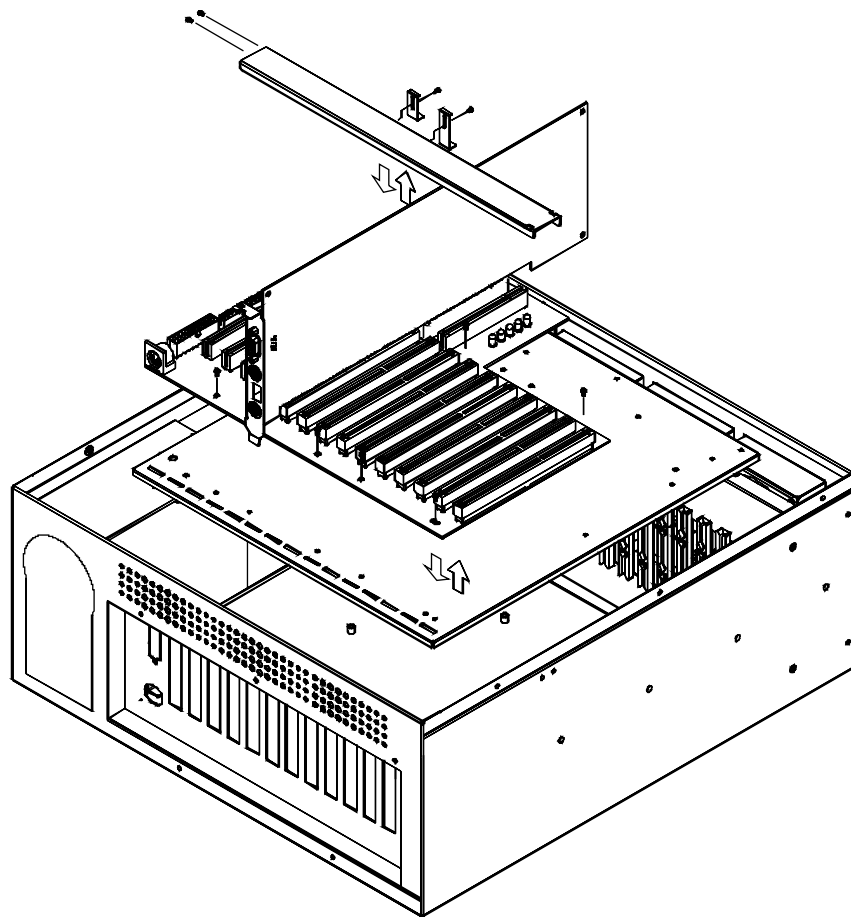
2.6.2 Redundant Power Supply for the Rack-3000 installation: ACE-R30A



2.7 The Card Clamp & Backplane Installation

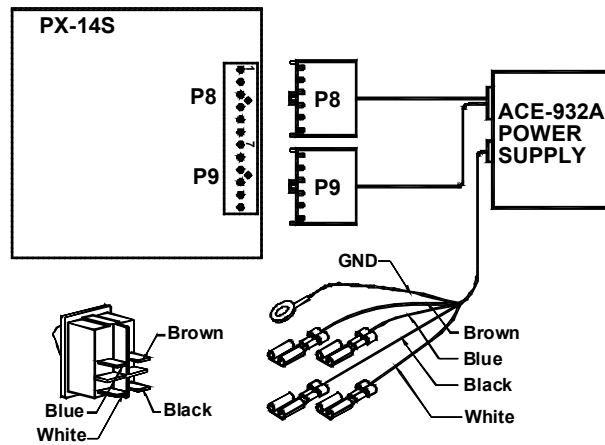
Figure below illustrates how to install the backplanes on the Rack-3000.

To install the backplanes in the chassis, remove the clamp panel first, then put the backplanes inside the chassis and screw it.

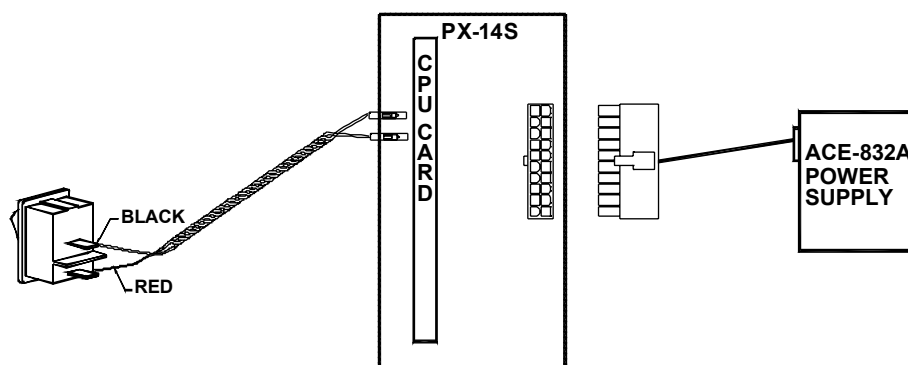


Cable Management

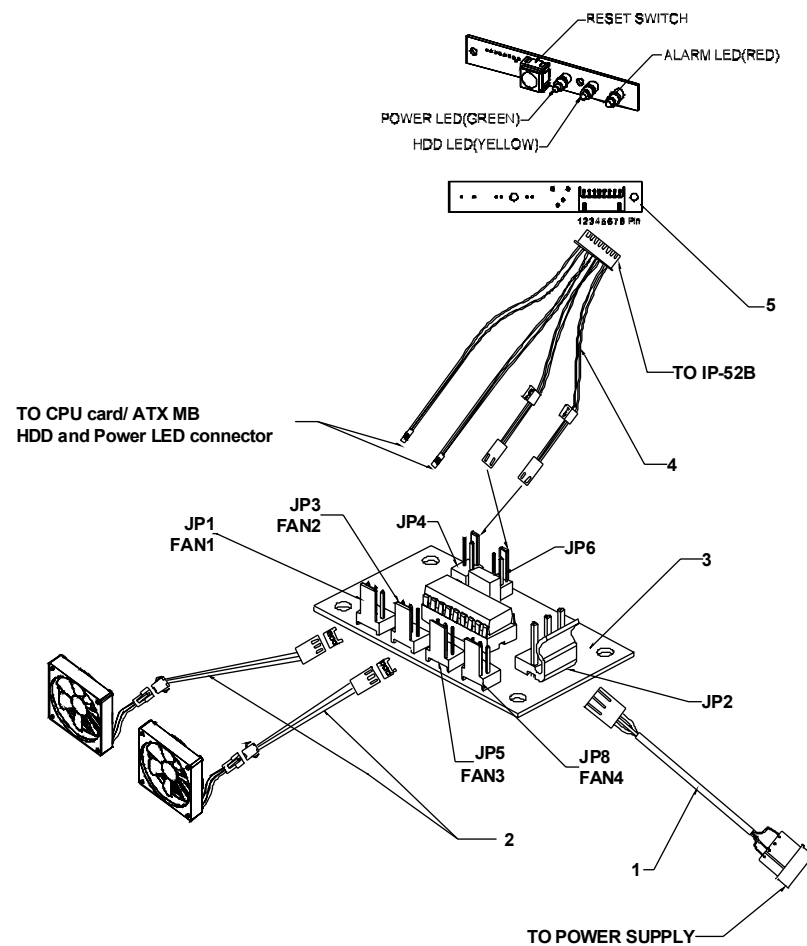
- AT power supply



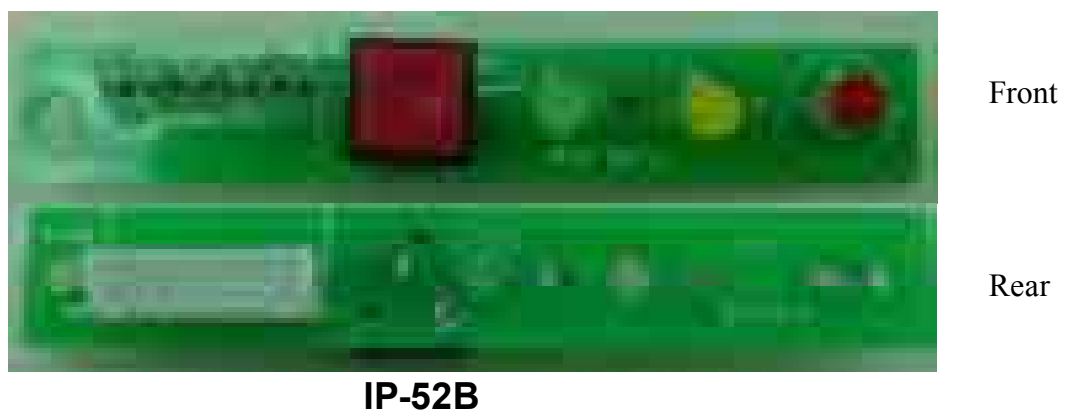
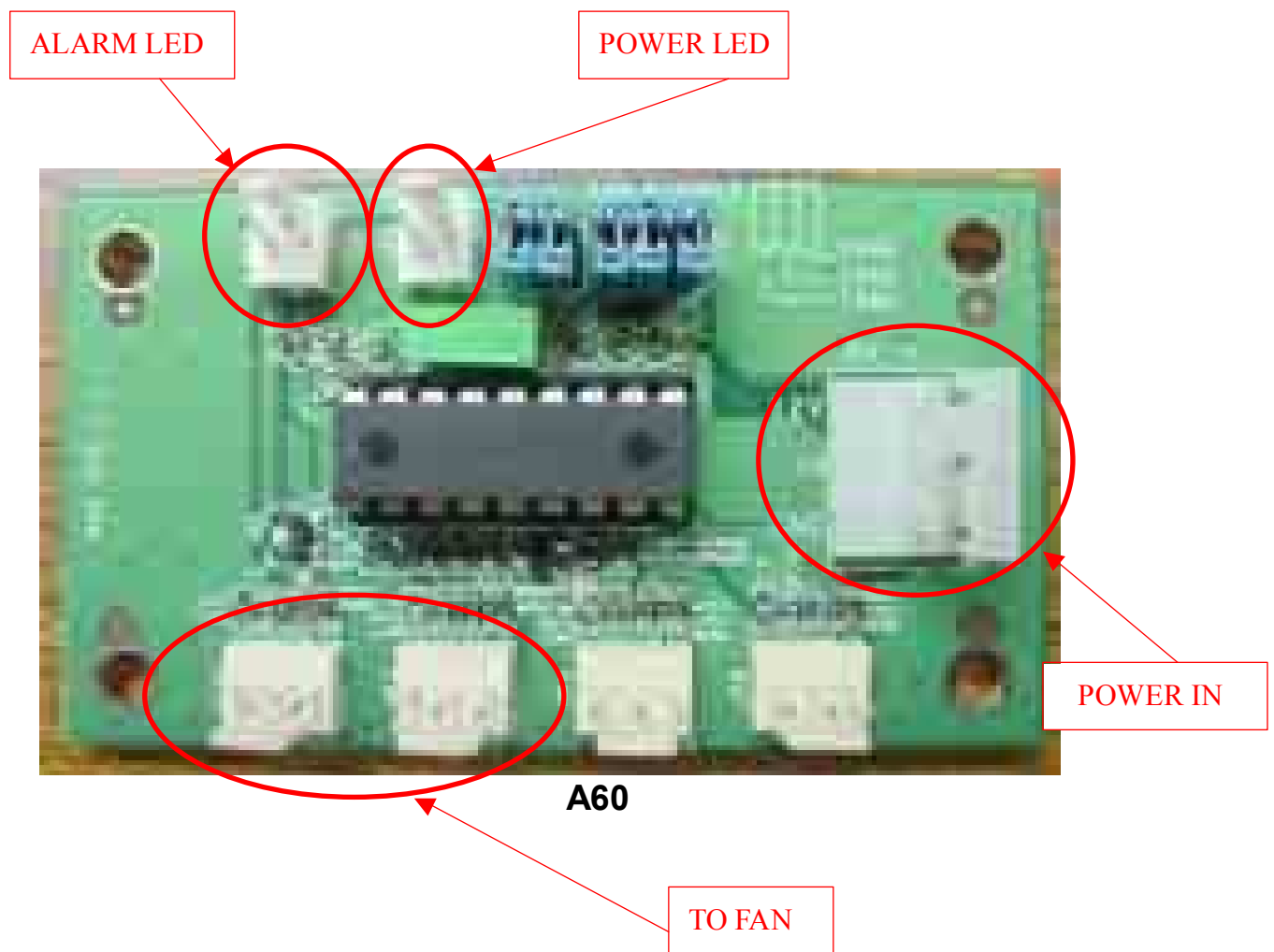
- ATX power supply



A60 & IP-52B Controller



ITEM	PART NO	SPECIFICATION	Q'TY	REMARK
1	32100-031101	Power cable	1	
2	32100-000260	Fan Extend Cable	1	
3	131A60-00-010	A60 Control Panel	1	
4	32100-044500	Cable	1	for reset HDD Power Alarm
5	131LP01-02-011	IP-52B	1	Control Panel



A60 Alarm board (Ver. 1.1)

(Pin Define)

Name	Pin	Descripon	
JP1	1	GND	
	2	Fan1 VCC	
	3	Fan1 sensor	
JP3	1	GND	
	2	Fan2 VCC	
	3	Fan2 sensor	
JP5	1	GND	
	2	Fan3 VCC	
	3	Fan3 sensor	
JP8	1	GND	
	2	Fan4 VCC	
	3	Fan4 sensor	
JP2	1	12V	
	2	5V	
	3	GND	
JP6	1	Power good LED display	
	2	GND	
JP4	1	Fan fail LED+	
	2	Fan fail LED-	
JP7	1-2	3-4	Monitor speed limit
	✓	✓	30 rpm
	×	✓	500 rpm
	✓	×	1000 rpm
	×	×	1500 rpm
JP9	1-2	3-4	5-6
	FAN2 disable	FAN3 disable	FAN4 disable

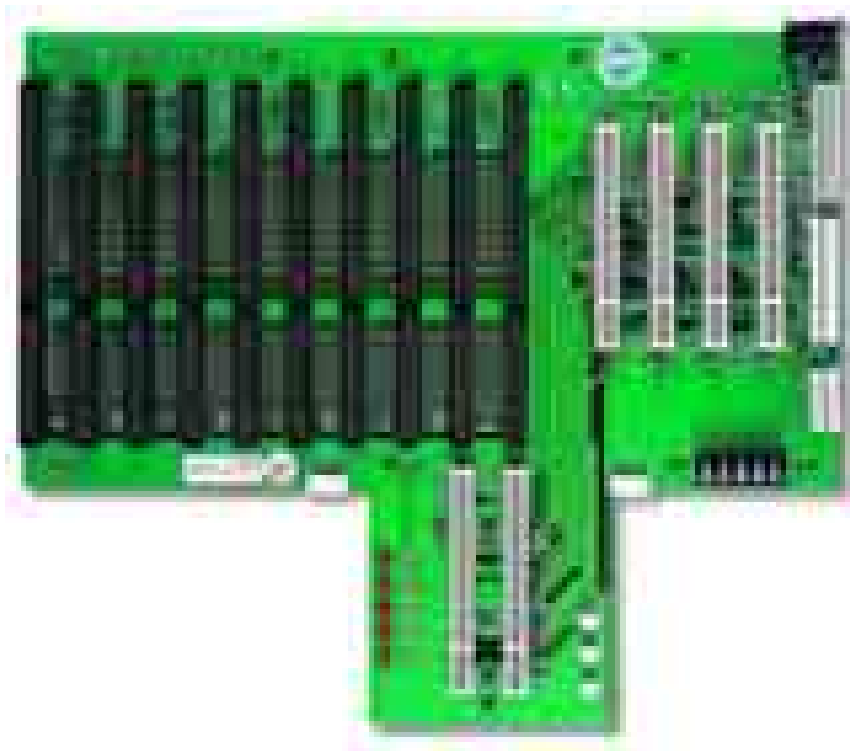
PS: ×=Open(開路)

✓=Short(短路)

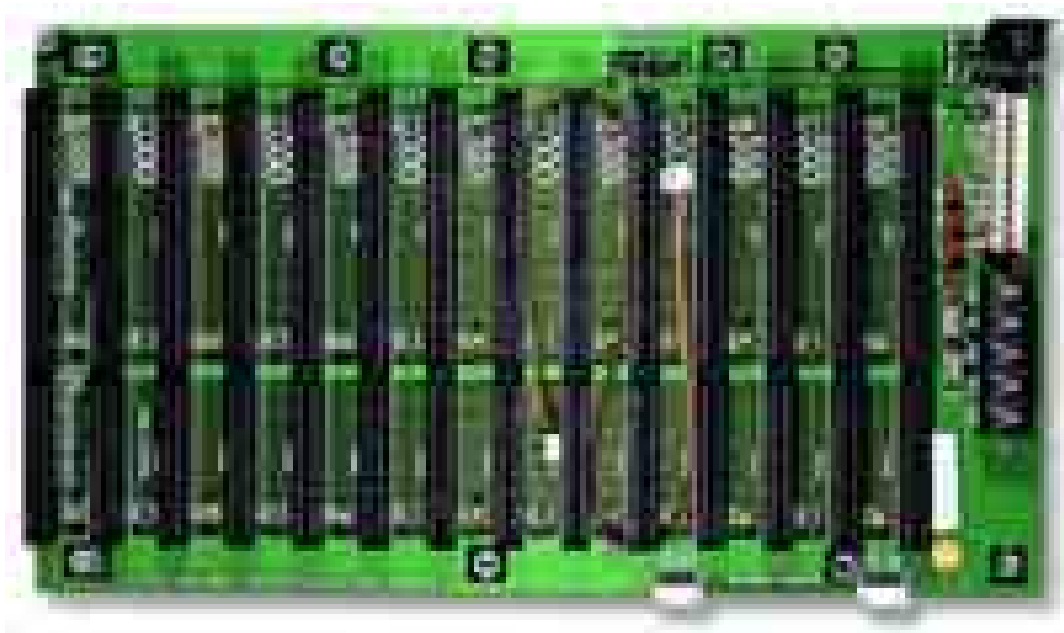
Please firstly use Fan 1, otherwise it's void to disable Fan X.

APPENDIX A PASSIVE BACKPLANES

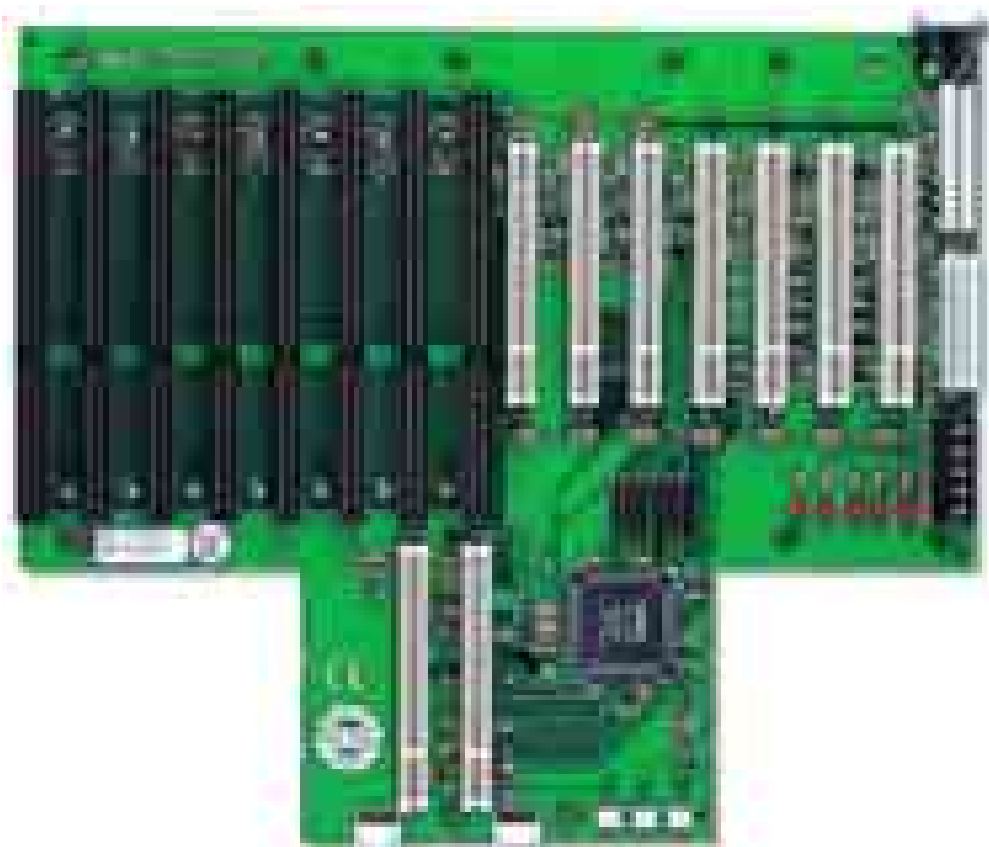
Model	ISA	PCI	PICMG	PCISA	Remark
PCI-14S	8	4	2	0	
PCI-14S2	7	4	2	0	
PCI-14S3	8	4	2	0	
BP-14S	14	0	0	0	
PX-14S	6	7	2	0	ISA/PICMG option
PX-14S1	5	7	2	0	
PX-14S2	5	7	2	0	
PX-14S3	1	12	2	0	PCI/PICMG option
PX-14S5	5	7	2	0	
IP-14S	8	4	0	2	
IP-14S3	9	2	0	3	



PCI-14S Serial



BP-14S Serial



PX-14S Serial

APPENDIX B POWER SUPPLY

RACK-3000 was designed for PS/2 size power supply.



PS/2 POWER SUPPLY SERIAL



ACE-R30A

Model Name		ACE-920A	ACE-932T	ACE-932A	ACE-935A	ACE-832A
Description		250W PS/2 size AC input power supply (PFC)	300W -48V PS/2 size DC input power supply	300W PS/2 size AC input power supply	350W PS/2 size AC input power supply	300W PS/2 size ATX power supply
Input Range	AC	85~265VAC @47~63Hz	-	85~130VAC or 180~265VAC @47~63Hz Auto-switch	85~140VAC or 180~270VAC @47~63Hz	95~132VAC, 180~264VAC @47~63Hz Auto-range
	DC	-	-40~70VDC	-	-	-
Output Voltages	Rating (max.)	200W	300W	300W	350W	300W
	+5V	20A	40A	33A	40A	30A
	+3.3V	-	-	-	-	28A
	+12V	4A	12A	8A	8A	15A
	-5V	0.5A	0.5	0.5A	0.3A	0.3A
	-12V	0.5A	3A	3A	0.7A	0.8A
	+5VSB	-	-	-	-	2A
MTBF (hours)		216700	141000	124100	200050	100000
Safety		UL/CSA/TUV	UL/CSA/TUV/CE	UL/CSA/TUV	UL/CSA/TUV	UL/CSA/TUV

Model Name		ACE-916V	ACE-925T	ACE-925C	ACE-R30A
Description		160W PS/2 size 12V DC input power supply	250W PS/2 size -48V DC input power supply	250W PS/2 size 24V DC input power supply	300W PS/2 size ATX redundant power supply (include two ACE-R30A power module)
Input Range	AC	-	-	-	90~132V or 180~264VAC @47~63Hz Switch select
	DC	8.5~16VDC	-40~65VDC	19~30VDC	-
Output Voltages	Rating (max.)	160W	250W	250W	300W
	+5V	25A	30A	30A	35A (2.5A min.)
	+3.3V	-	-	-	15A (0.5A min.)
	+12V	7A	12A	12A	15A (0.5A min.)
	-5V	0.5A	1A	1A	0.5A
	-12V	0.5A	2A	2A	0.8A
	+5VSB	-	-	-	1.5A
MTBF (hours)		202500	198500	206000	50000
Safety		UL/CSA/TUV/CE	UL/CSA/TUV/CE	UL/CSA/TUV/CE	UL/CSA/TUV

APPENDIX C Drive Bay

5.25" Drive Bay	3 open space
3.5" Drive Bay	2 open 1 Internal space

